

Prior Art

Figure 1

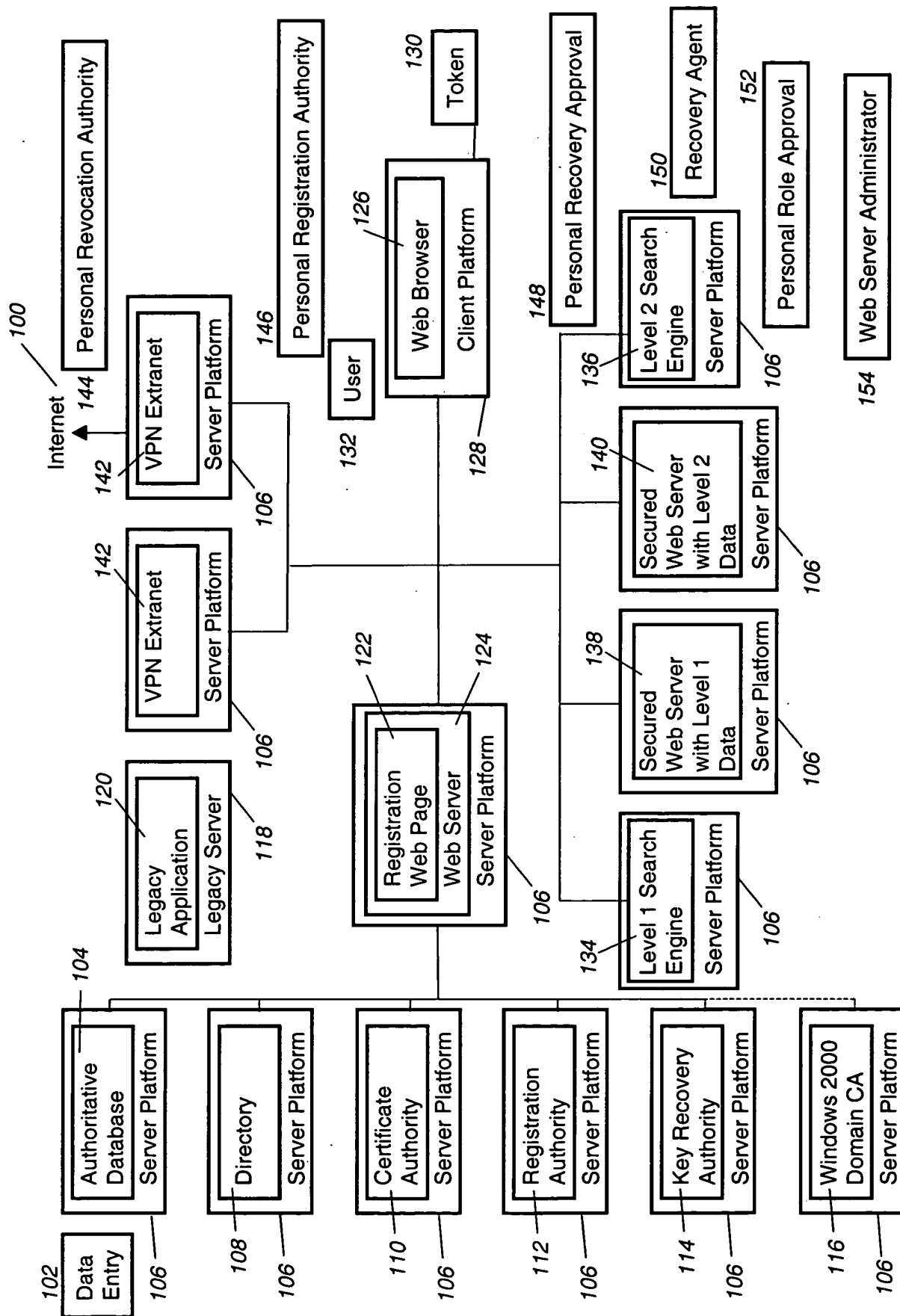


Figure 2

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graph TD
    S10[S10 Create Directory Password for User] --> S11[S11 Password Sent to Directory]
    S11 -.-> S12[S12 User Accesses Registration Web Server]
    S12 --> S13[S13 Registration Web Server Requests User's Signature for Authentication]
    S13 --> S14[S14 Registration Web Server Receives Signature]
    S14 --> S15[S15 Encrypted Channel to Registration Web Server Created]
    S15 --> S16[S16 User Requests Revocation of User's Signature Certificate]
    S16 --> S17[S17 Registration Web Server Notifies Directory That Certificate Has Been Revoked]
    S17 --> S18{S18 User Desires New Certificate}
    S18 -- No --> S19([S19 End])
    S18 -- Yes --> S20[S20 User Provided One Time Pin By Registration Web Server]
    S20 --> S21[S21 User Uses Pin and Directory Password to Request New Signature Certificate]
    S21 --> S16

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### Figure 3

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graph TD
    S30[S30: Create Directory Password for User] --> S31[S31: Password Sent to Directory]
    S31 -.-> S32[S32: User Notifies PRA of Lost Signature Certificate]
    S32 --> S33[S33: PRA Accesses Registration Web Server]
    S33 --> S34[S34: Registration Web Server Requests PRA's Signature for Authentication]
    S34 --> S35[S35: Registration Web Server Receives Signature]
    S35 --> S36[S36: Encrypted Channel to Registration Web Server Created]
    S36 --> S37[S37: PRA Requests Revocation of User's Signature Certificate]
    S37 --> S38[S38: Registration Web Server Queries Directory if PRA Permitted to Terminate User]
    S38 --> S39{S39: PRA Permitted to Terminate User}
    S39 -- No --> S40([S40: End])
    S39 -- Yes --> S41[S41: Registration Web Server Signals Directory to Set User Back to New User State]
    S41 --> S42{S42: New Certificate for User}
    S42 -- No --> S43([S43: End])
    S42 -- Yes --> S44[S44: PRA Provided One Time Pin By Registration Web Server]
    S44 --> S45[S45: PRA Gives Pin to User in Face-to-Face Meeting]
    S45 --> S46[S46: User Uses Pin and Directory Password to Request New Signature Certificate]
    S46 --> S32

```

### Figure 4

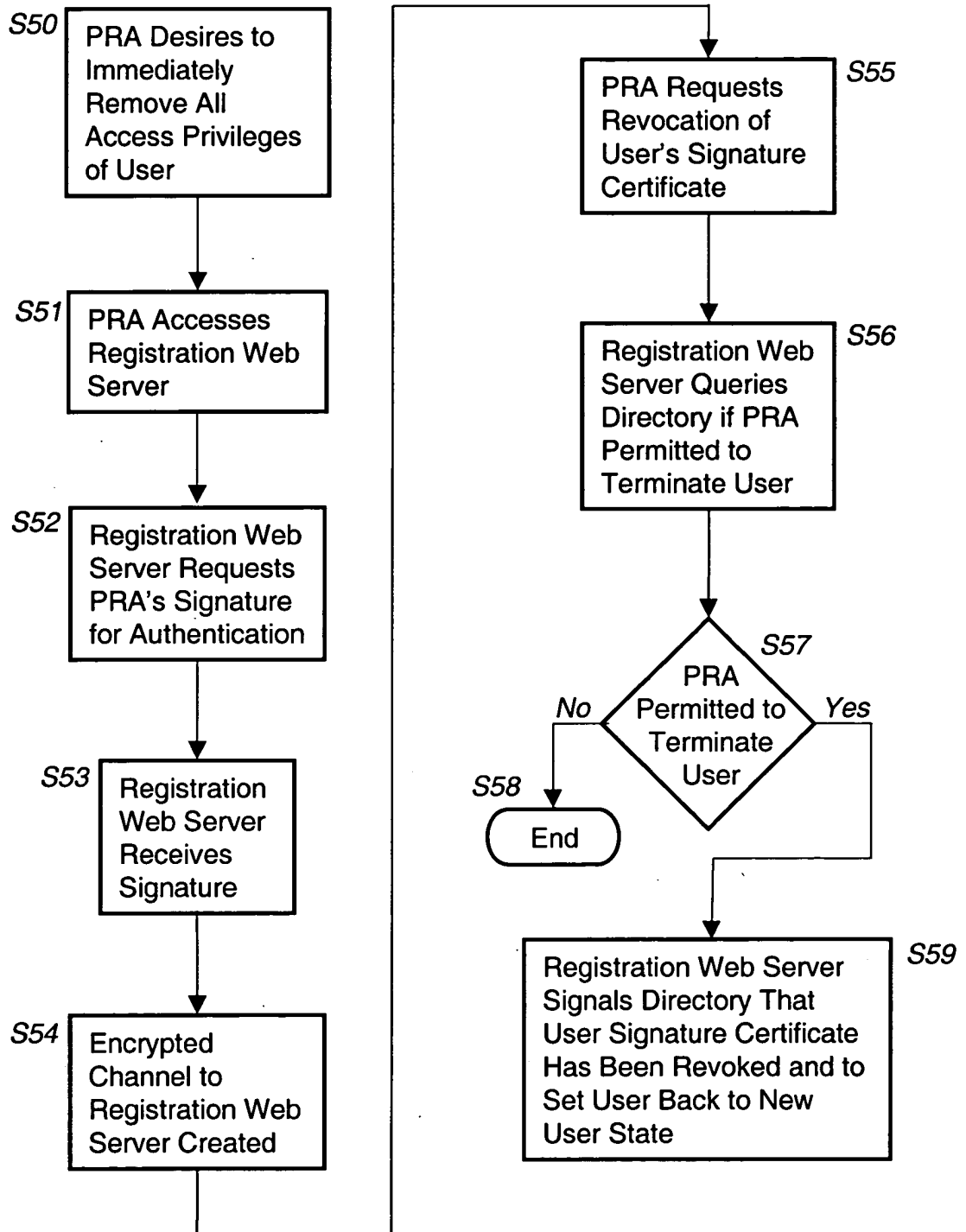


Figure 5